

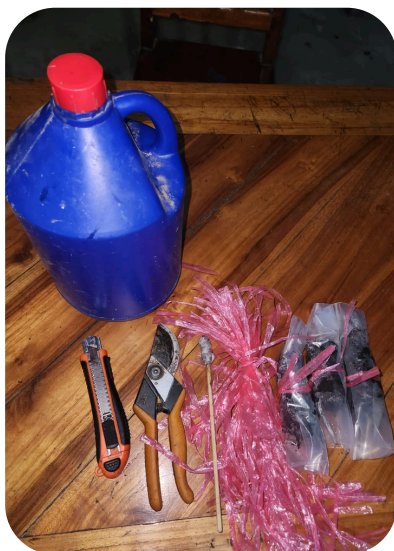
Material and Equipment Preparation

Materials

- Rootstock
- String
- B-Start Vitamin B1 Rooting Hormone
- Coconut fiber

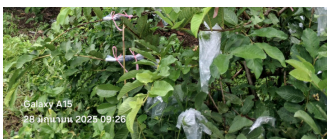
Equipment

- Sharp pruning shears (or secateurs)
- Grafting knife (or budding knife)



Rationale of the initiative

This initiative is carried out within the framework of the National Agricultural Development Policy, which prioritizes improving fruit production and supporting rural livelihoods. It originated from participatory workshops, where farmers expressed a strong need for training and access to high-quality planting material.



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Advantages of Fruit Trees Propagation

Fruit tree propagation helps multiply trees, conserve species, boost yields, and generate income. It protects against mutations, maintains superior varieties, and supports commercial fruit production. By using methods such as cutting, grafting, and tissue culture, farmers can increase the number of trees, preserve desirable traits - such as greater disease resistance, higher yields, and better nutritional value, and safeguard valuable genetic resources. These improvements benefit farmers and consumers while strengthening food security.

In addition, propagation supports economic growth. The production and sale of seedlings, cuttings, and planting materials can provide significant income for individuals and communities, supporting local economies and contributing to the overall agricultural sector.

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Technical Leaflet FRUIT TREES CUTTING AND NURSING



Location of implementation
Phonsavang and ParkOu district,
Luangprabang Province, Lao PDR

Agroecological system:

Zone	Main activities	Climate	Rainfalls	Temperature
Plain	Planting and cultivation	Seasonally tropical (rainy season: June to October)	~ 1300 mm/year	Avg max: 35°C - Avg min: 14°C



Introduction

This leaflet provides practical guidance on fruit tree propagation. It states how to make new branches growing and how to cut them in order to make new plants. It also explains the monitoring and selection process.

Step 01: Tree and branch selection



Tree selection

- Productive (high yield)
- At least 3 years old
- Healthy, with good growth performance
- Corresponds to market demand

Branch selection

- Neither too old nor too young
- Length 50–70 cm, diameter about 0.5 cm
- Straight branch

Step 02: Propagation techniques for branches



- Cut unnecessary sub-branches using pruning shears, leaving 2-3 sub-branches per branch.
- Remove a 5 cm strip of bark in the branch (ring cut)
- Scrape off the cambium tissue (deep cut until sapwood) within the ring
- Apply rooting hormone on the upper edge of the cut
- Place a layering bag filled with coconut fiber on the upper part
- Wrap with plastic and tie both ends tightly
- Record the date, number and varieties of propagation.

Step 03: Monitoring and maintenance of the branches



- Check every 2 weeks to ensure the medium stays moist
- If it is too dry, add water
- Propagation is more successful in the rainy season due to higher moisture
- New branches usually appear and are ready for cutting within 8 weeks, depending on species and climate
- For some species like guava, an additional support like a stick may be needed

Step 04: Cutting and nursing for new plants



Prepare nursery bags

- 4 × 9 inches, filled with moist soil

Cutting

- When healthy roots are visible through the plastic (brown color), cut the branch just below the rooted section
- Prune unnecessary branches, reducing canopy by about 40–60%
- Remove all flowers and fruits

Prepare the nursery bed

- Raised bed (mound/column)
- 60–70% sunlight
- Protect from farm animals and children
- Set up sprinklers for water supply.

Transferring of the branches to the bed

- Carefully remove the plastic and plant the rooted branch in the nursery bed with moist soil

Nursery monitoring

- Check daily to ensure soil moisture between 70–80% and protect it from animals
- After 3 weeks, transfer seedlings to a nursery shed with 50% sunlight
- After 6 weeks, seedlings are ready for delivery to farmers for field planting